

ABSTRACT OF THE DISCLOSURE

Disclosed is a plasma processing apparatus for performing a plasma processing, comprising an electromagnetic wave source for generating an electromagnetic wave, a rectangular waveguide, a
5 plurality of slots formed in the rectangular waveguide and constituting a waveguide antenna, an electromagnetic wave radiation window consisting of a dielectric body, and a vacuum chamber, wherein a plasma
10 is generated by an electromagnetic wave radiated from the slots into the vacuum chamber through the electromagnetic wave radiation window, the plasma processing apparatus being constructed to include an electromagnetic wave distributing waveguide portion for
15 distributing the electromagnetic wave generated from the electromagnetic wave source into each of the waveguides, the plural waveguides being branched from the electric field plane or a plane perpendicular to the magnetic field plane of the electromagnetic wave
20 distributing waveguide portion.